1. ***Why do we need machine learning methods instead of creating a complicated formula?***

Because we can not get a formula for some questions.

2. ***Wha't's the disadvantages of the 1st Random Choosen methods in our course?***

The disadvantage is that it need spend a lot of time to get good loss.

3. ***Is the 2nd method supervised direction better than 1st one? What's the disadvantages of the 2nd supversied directin method?***

Sure. The disadvantage is it does not know which direction can get better performance.

4. ***Why do we use Derivative / Gredient to fit a target function?***

Because it can get which direction is good and then getting local optimal value.

5. ***In the words 'Gredient Descent', what's the Gredient and what's the Descent?***

6. ***What's the advantages of the 3rd gradient descent method compared to the previous methods?***

It can quickly get local optimal vaule and then save a lot time.

7. ***Using the simple words to describe: What's the machine leanring.***

Machine learning is a method of data analysis that automates analytical modeling building by using data.